Author Index

Akazome, M., Kondo, T. and Watanabe, Y.
Ruthenium complex-catalyzed selective deoxygenation of amidoximes to amidines and its application to the facile synthesis of pyrimidines 383

Alcantara, A.R., Sinisterra, J.V., Guanti, G.G., Thea, S. and Williams, A.
Importance of Hansch's π parameter in the catalytic action of microgel-immobilised subtilisin dissolved in tetrahydrofuran solvent 137

Alper, H., see El Ali, B. 377

Andreev, A., see Buck, T. 253

Aparicio, J. and Sinisterra, J.V.
Influence of the chemical and textural properties of the support in the immobilization of penicillin G-acylase from *Kluyvena citrophila* on inorganic supports 269

Augustine, R.L. and Tanielyan, S.K.
Correlation between the single turnover (STO) site densities and the rates of 4-*tert*-butyl-1-methylcyclohexene hydrogenation over silica supported palladium catalysts 277

Baird, M.C., see Renaud, E. 43

Bhattacharya, P.K., see Upadhyay, M.J. 1

Bischoff, H., Jaeger, N.I., Schulz-Ekloff, G. and Kubelkova, L.
Interaction of CO with platinum species in zeolites. Evidence for platinum carbonyls in partially reduced zeolite PtNaX 95

Bohlen, H., see Buck, T. 253

Bosch, P., Lopez, T., Lara, V.-H. and Gomez, R.
Pt/SiO_2 catalysts: a comparison of the impregnation and the sol-gel methods 299

Brocławik, E., see Petelenz, P. 341

Brzyska, M., see Grzywnowicz, K. 117

Buck, T., Bohlen, H., Wöhrle, D., Schulz-Ekloff, G. and Andreev, A.
Influence of substituents and ligands of various cobalt(II) porphyrin derivatives coordinately bonded to silica on the oxidation of mercaptan 253

Čermák, J., Soukupová, L. and Chvalovský, V.
Propadiene oligomerization catalyzed by nickel(0) phosphine complexes immobilized on phosphinated poly(styrene–divinylbenzene) support 181

Chang, J.-R., Xu, Z., Purnell, S.K. and Gates, B.C.
Synthesis and decarbonylation of platinum carbonyl cluster anions in zeolite NaY made basic by treatment with CsOH 49

Chaudhari, R.V., see Kelkar, A.A. 21

Chen, Y., see Heinrich, B. 365

Cho, N.S., see Lee, C.W. 31

Chvalovský, V., see Čermák, J. 181

Corain, B., see Mastrorilli, P. L5

Csányi, L.J., Jáky, K. and Kiss, J.T.
Effects of water and onium ion phase-transfer catalyst on the rate of liquid-phase oxidation of hydrocarbons 353

Deweerdt, H., see Duprat, S. L9

Duprat, S., Deweerdt, H., Jenck, J. and Kalck, P.
Dicarbonylation of 1,4-diacetoxy-but-2-ene in hex-3-ene dioate catalyzed by $PdCl_2$ in the presence of PBu_4Cl L9

El Ali, B. and Alper, H.
Regiochemical synthesis of straight chain acids by the palladium(II) catalyzed hydrocarboxylation of olefins with oxalic acid 377

Enzo, S., see Lenarda, M. 105

Fache, F., see Fahmi, K. 201

Fahmi, K., Fache, F. and Lemaire, M.
A new and convenient method for the synthesis of 3-alkyl thiophenes 201

Filatov, M.J., Pelmenschikov, A.G. and Zhidomirov, G.M.
On the nature of superactive centers in H-ZSM-5 zeolites: quantum chemical calculations 243

Frank, A.J., see Palmans, R. 327

Ganeshpure, P.A., see Upadhyay, M.J. 1

Ganzerla, R., see Lenarda, M. 105

Gates, B.C., see Chang, J.-R. 49

Gomez, R., see Bosch, P. 299

Greppin, H., see Grzywnowicz, K. 117

Grzywnowicz, K., Greppin, H., Brzyska, M. and Łobarzewski, J.
Changes in activity of soluble and immo-

bilized peroxidases after treatment by various proteases and some metal ions 117
Guanti, G.G., see Alcantara, A.R. 137
Harustiak, M., see Kaszonyi, A. L13
Heinrich, B., Chen, Y. and Hjortkjær, J.
Gas phase hydroformylation of propene catalyzed by a polymer bound rhodium(I) complex 365
Heras, A., see Martín, M.T. 127
Hevesi, L., see Proess, G. 395
Hjortkjær, J., see Heinrich, B. 365
Houlding, V.H., see Palmans, R. 327
Hronec, M., see Kaszonyi, A. L13
Iwamoto, M., see Mizuno, N. 229
Jaeger, N.I., see Bischoff, H. 95
Jáky, K., see Csányi, L.J. 353
Jenck, J., see Duprat, S. L9
Jenner, G.
Novel catalytic procedure for selective homologation of primary alcohols L1
Kagawa, S., see Mizuno, N. 229
Kalck, P., see Duprat, S. L9
Kaszonyi, A., Hronec, M. and Harustiak, M.
Catalytic oxidation of hydrazodicarboxamide to azodicarboxamide by oxygen L13
Kelkar, A.A., Ubale, R.S. and Chaudhari, R.V.
Carbonylation of methyl acetate to acetic anhydride using homogeneous nickel complex catalyst 21
Kim, K.D., see Lee, C.W. 31
King, R.B., see Linn, Jr., D.E. 151
King, R.B., see Linn, Jr., D.E. 165
King, Jr., A.D., see Linn, Jr., D.E. 151
King, Jr., A.D., see Linn, Jr., D.E. 165
Kiss, J.T., see Csányi, L.J. 353
Kondo, T., see Akazome, M. 383
Kubelkova, L., see Bischoff, H. 95
Lara, V.-H., see Bosch, P. 299
Lee, C.W., Lee, J.S., Cho, N.S., Kim, K.D., Lee, S.M. and Oh, J.S.
Palladium-catalyzed oxidation of triphenylphosphine 31
Lee, J.S., see Lee, C.W. 31
Lee, S.M., see Lee, C.W. 31
Lemaire, M., see Fahmi, K. 201
Lenarda, M., Ganzerla, R., Enzo, S., Storaro, L. and Zanoni, R.
Vapour phase propene hydroformylation catalyzed by the Rh/Al system on silica 105
Linn, Jr., D.E., King, R.B. and King, Jr., A.D.
Catalytic reactions of formate: Part 1. Photocatalytic hydrogen production from formate with chromium hexacarbonyl 151
Linn, Jr., D.E., King, R.B. and King, Jr., A.D.
Catalytic reactions of formate: Part 2. Aldehyde hydrogenation using chromium hexacarbonyl 165
Łobarzewski, J., see Grzywnowicz, K. 117
Lopez, T., see Bosch, P. 299
Martín, M.T., Sinisterra, J.V. and Heras, A.
Influence of the modification procedure of support materials on the microenvironment of immobilized α-chymotrypsin 127
Mastrorilli, P., Nobile, C.F., Ravasio, N., Corain, B. and Zecca, M.
Regioselective hydrogenation of 3-phenylpropenal and of *trans*-2-hexenal to saturated aldehydes catalysed by ultrafine rhodium particles dispersed on acrylic resins L5
McGarvey, G.B., Taylor, N.J. and Moffat, J.B.
Characterization of the compounds formed from the interaction of divalent cations with inorganic molecular metal–oxygen cluster compounds 59
Mieczyńska, E., Trzeciak, A.M. and Ziółkowski, J.J.
Effect of carboxylic acids on the yield and selectivity of the hydroformylation of hex-1-ene catalyzed by $[Rh(acac)(CO)(PPh_3)]$ 189
Miskowski, V.M., see Palmans, R. 327
Mizuno, N., Mori, H., Tajima, M., Kagawa, S., Ueno, H., Yahiro, H. and Iwamoto, M.
Formation of ketones from lower olefins and water on ultrastable Y-type zeolite catalyst 229
Moffat, J.B., see McGarvey, G.B. 59
Moffat, J.B., see Nayak, V.S. 75
Mori, H., see Mizuno, N. 229
Nayak, V.S. and Moffat, J.B.
Comparison of the surface properties of the metal–oxygen cluster compounds, 12-tungstophosphoric acid and ammonium 12-tungstophosphate from the sorption of benzene, nitrogen and pyridine 75

Nobile, C.F., see Mastrorilli, P. L5
Oh, J.S., see Lee, C.W. 31
Onishi, M.
Decomposition of formic acid catalyzed by hydrido(phosphonite)cobalt(I) under photoirradiation 145
Oskam, A., see Vuurman, M.A. 209
Palmans, R., Frank, A.J., Houlding, V.H. and Miskowski, V.M.
Photophysics and photosensitization behavior of microcrystalline $[Pt(bpy)_2]_2[Pt_2(pop)_4]\cdot nH_2O$ 327
Pelmenschikov, A.G., see Filatov, M.J. 243
Petelenz, P. and Brocławik, E.
Finite supercluster model of vanadium oxide catalysts. Part II. Adsorbate-adsorbate interactions 341
Proess, G. and Hevesi, L.
Synthesis of a new chiral porphyrin ligand and its Mn(III) complex as catalyst in asymmetric alkene epoxidation 395
Purnell, S.K., see Chang, J.-R. 49
Ravasio, N., see Mastrorilli, P. L5
Renaud, E. and Baird, M.C.
^{31}P spin lattice relaxation time measurements of the amphiphilic ligands $[Ph_2P(CH_2)_nPMe_3]^+$ in solution and tethered to a solid cationic exchange resin via the tetra-alkylphosphonium groups 43
Ruette, F., see Urbina-Villalba, G. 307
Salem, I.A.
Role of aliphatic diamine ligands in hydrogen peroxide decomposition with Dowex-50W resin as transition metal complex ions 11
Satish, S., see Upadhyay, M.J. 1
Schulz-Ekloff, G., see Bischoff, H. 95
Schulz-Ekloff, G., see Buck, T. 253
Sinisterra, J.V., see Martín, M.T. 127
Sinisterra, J.V., see Alcantara, A.R. 137
Sinisterra, J.V., see Aparicio, J. 269
Soukupová, L., see Čermák, J. 181
Storaro, L., see Lenarda, M. 105
Stufkens, D.J., see Vuurman, M.A. 209
Tajima, M., see Mizuno, N. 229
Tanielyan, S.K., see Augustine, R.L. 277
Taylor, N.J., see McGarvey, G.B. 59
Thea, S., see Alcantara, A.R. 137
Trzeciak, A.M., see Mieczyńska, E. 189
Ubale, R.S., see Kelkar, A.A. 21
Ueno, H., see Mizuno, N. 229
Upadhyay, M.J., Bhattacharya, P.K., Ganeshpure, P.A. and Satish, S.
Oxidation of organic substrates catalysed by mixed ligand Ru^{III} complexes. Investigation of active catalytic species and termination pathway 1
Urbina-Villalba, G. and Ruette, F.
Semiempirical study of carbon monoxide, oxygen and carbon adsorption on a modelled CoSi(100) surface 307
Vuurman, M.A., Wachs, I.E., Stufkens, D.J. and Oskam, A.
Characterization of chromium oxide supported on Al_2O_3, ZrO_2, TiO_2, and SiO_2 under dehydrated conditions 209
Wachs, I.E., see Vuurman, M.A. 209
Watanabe, Y., see Akazome, M. 383
Williams, A., see Alcantara, A.R. 137
Wöhrle, D., see Buck, T. 253
Xu, Z., see Chang, J.-R. 49
Yahiro, H., see Mizuno, N. 229
Zanoni, R., see Lenarda, M. 105
Zecca, M., see Mastrorilli, P. L5
Zhidomirov, G.M., see Filatov, M.J. 243
Ziółkowski, J.J., see Mieczyńska, E. 189

Subject Index

acetic anhydride
Carbonylation of methyl acetate to acetic anhydride using homogeneous nickel complex catalyst 21
acidic properties
Comparison of the surface properties of the metal–oxygen cluster compounds, 12-tungstophosphoric acid and ammonium 12-tungstophosphate from the sorption of benzene, nitrogen and pyridine 75
acrylic resins
Regioselective hydrogenation of 3-phenylpropenal and of *trans*-2-hexenal to saturated aldehydes catalysed by ultrafine rhodium particles dispersed on acrylic resins L5
active catalytic species
Oxidation of organic substrates catalysed by mixed ligand Ru^{III} complexes. Investigation of active catalytic species and termination pathway 1
adsorbate–adsorbate interactions
Finite supercluster model of vanadium oxide catalysts. Part II. Adsorbate–adsorbate interactions 341
adsorption
Semiempirical study of carbon monoxide, oxygen and carbon adsorption on a modelled CoSi(100) surface 307
aldehydes
Catalytic reactions of formate: Part 2. Aldehyde hydrogenation using chromium hexacarbonyl 165
alkenes
Synthesis of a new chiral porphyrin ligand and its Mn(III) complex as catalyst in asymmetric alkene epoxidation 395
alkyl formates
Novel catalytic procedure for selective homologation of primary alcohols L1
alkyl thiophenes
A new and convenient method for the synthesis of 3-alkyl thiophenes 201
alumina
Characterization of chromium oxide supported on Al_2O_3, ZrO_2, TiO_2, and SiO_2 under dehydrated conditions 209
aluminium
Vapour phase propene hydroformylation catalyzed by the Rh/Al system on silica 105
amidine
Ruthenium complex-catalyzed selective deoxygenation of amidoximes to amidines and its application to the facile synthesis of pyrimidines 383
amidoxime
Ruthenium complex-catalyzed selective deoxygenation of amidoximes to amidines and its application to the facile synthesis of pyrimidines 383
ammonium 12-tungstophosphate
Comparison of the surface properties of the metal–oxygen cluster compounds, 12-tungstophosphoric acid and ammonium 12-tungstophosphate from the sorption of benzene, nitrogen and pyridine 75
asymmetric epoxidation
Synthesis of a new chiral porphyrin ligand and its Mn(III) complex as catalyst in asymmetric alkene epoxidation 395
azodicarboxamide
Catalytic oxidation of hydrazodicarboxamide to azodicarboxamide by oxygen L13
benzylic alcohols
A new and convenient method for the synthesis of 3-alkyl thiophenes 201
carbon
Semiempirical study of carbon monoxide, oxygen and carbon adsorption on a modelled CoSi(100) surface 307
carbon monoxide
Interaction of CO with platinum species in zeolites. Evidence for platinum carbonyls in partially reduced zeolite PtNaX 95
Semiempirical study of carbon monoxide, oxygen and carbon adsorption on a modelled CoSi(100) surface 307
Regiochemical synthesis of straight chain acids by the palladium(II) catalyzed hydrocarboxylation of olefins with oxalic acid 377

carbonylation
Dicarbonylation of 1,4-diacetoxy-but-2-ene in hex-3-ene dioate catalyzed by $PdCl_2$ in the presence of PBu_4Cl L9
carbonyl cluster synthesis
Synthesis and decarbonylation of platinum carbonyl cluster anions in zeolite NaY made basic by treatment with CsOH 49
carbonyl complexes
Catalytic reactions of formate: Part 1. Photocatalytic hydrogen production from formate with chromium hexacarbonyl 151
Catalytic reactions of formate: Part 2. Aldehyde hydrogenation using chromium hexacarbonyl 165
carboxylic acids
Effect of carboxylic acids on the yield and selectivity of the hydroformylation of hex-1-ene catalyzed by $[Rh(acac)(CO)(PPh_3)]$ 189
Regiochemical synthesis of straight chain acids by the palladium(II) catalyzed hydrocarboxylation of olefins with oxalic acid 377
cation exchange resins
^{31}P spin lattice relaxation time measurements of the amphiphilic ligands $[Ph_2P(CH_2)_nPMe_3]^+$ in solution and tethered to a solid cationic exchange resin via the tetra-alkylphosphonium groups 43
chemisorption
Interaction of CO with platinum species in zeolites. Evidence for platinum carbonyls in partially reduced zeolite PtNaX 95
chiral induction
Synthesis of a new chiral porphyrin ligand and its Mn(III) complex as catalyst in asymmetric alkene epoxidation 395
chromium
Catalytic reactions of formate: Part 1. Photocatalytic hydrogen production from formate with chromium hexacarbonyl 151
Catalytic reactions of formate: Part 2. Aldehyde hydrogenation using chromium hexacarbonyl 165
Characterization of chromium oxide supported on Al_2O_3, ZrO_2, TiO_2, and SiO_2 under dehydrated conditions 209
α-chymotrypsin
Influence of the modification procedure of support materials on the microenvironment of immobilized α-chymotrypsin 127
cluster compounds
Characterization of the compounds formed from the interaction of divalent cations with inorganic molecular metal–oxygen cluster compounds 59
cobalt
Role of aliphatic diamine ligands in hydrogen peroxide decomposition with Dowex-50W resin as transition metal complex ions 11
Influence of substituents and ligands of various cobalt(II) porphyrin derivatives coordinately bonded to silica on the oxidation of mercaptan 253
cobalt silicide
Semiempirical study of carbon monoxide, oxygen and carbon adsorption on a modelled CoSi(100) surface 307
copper
Role of aliphatic diamine ligands in hydrogen peroxide decomposition with Dowex-50W resin as transition metal complex ions 11
counter ion effect
Gas phase hydroformylation of propene catalyzed by a polymer bound rhodium(I) complex 365
cyclohexene derivatives
Correlation between the single turnover (STO) site densities and the rates of 4-*tert*-butyl-1-methylcyclohexene hydrogenation over silica supported palladium catalysts 277
deactivation
Gas phase hydroformylation of propene catalyzed by a polymer bound rhodium(I) complex 365
decarbonylation
Synthesis and decarbonylation of platinum carbonyl cluster anions in zeolite NaY made basic by treatment with CsOH 49
density of states
Semiempirical study of carbon monoxide, oxygen and carbon adsorption on a modelled CoSi(100) surface 307

deoxygenation
Ruthenium complex-catalyzed selective deoxygenation of amidoximes to amidines and its application to the facile synthesis of pyrimidines 383
diacetoxybutene
Dicarbonylation of 1,4-diacetoxy-but-2-ene in hex-3-ene dioate catalyzed by $PdCl_2$ in the presence of PBu_4Cl L9
diamine ligands
Role of aliphatic diamine ligands in hydrogen peroxide decomposition with Dowex-50W resin as transition metal complex ions 11
divalent cations
Characterization of the compounds formed from the interaction of divalent cations with inorganic molecular metal–oxygen cluster compounds 59
double salts
Photophysics and photosensitization behavior of microcrystalline $[Pt(bpy)_2]_2[Pt_2(pop)_4]\cdot nH_2O$ 327
Dowex-50W resin
Role of aliphatic diamine ligands in hydrogen peroxide decomposition with Dowex-50W resin as transition metal complex ions 11
enzyme activation
Influence of the chemical and textural properties of the support in the immobilization of penicillin G-acylase from *Kluyvena citrophila* on inorganic supports 269
enzyme activity
Changes in activity of soluble and immobilized peroxidases after treatment by various proteases and some metal ions 117
finite supercluster model
Finite supercluster model of vanadium oxide catalysts. Part II. Adsorbate–adsorbate interactions 341
formate
Catalytic reactions of formate: Part 1. Photocatalytic hydrogen production from formate with chromium hexacarbonyl 151
Catalytic reactions of formate: Part 2. Aldehyde hydrogenation using chromium hexacarbonyl 165
formic acid decomposition
Decomposition of formic acid catalyzed by hydrido(phosphonite)cobalt(I) under photoirradiation 145
Grignard reaction
A new and convenient method for the synthesis of 3-alkyl thiophenes 201
Hansch's π parameter
Importance of Hansch's π parameter in the catalytic action of microgel-immobilised subtilisin dissolved in tetrahydrofuran solvent 137
heteropolyacids
Catalytic oxidation of hydrazodicarboxamide to azodicarboxamide by oxygen L13
heteropoly oxometalates
Characterization of the compounds formed from the interaction of divalent cations with inorganic molecular metal–oxygen cluster compounds 59
Comparison of the surface properties of the metal–oxygen cluster compounds, 12-tungstophosphoric acid and ammonium 12-tungstophosphate from the sorption of benzene, nitrogen and pyridine 75
hexenal
Regioselective hydrogenation of 3-phenylpropenal and of *trans*-2-hexenal to saturated aldehydes catalysed by ultrafine rhodium particles dispersed on acrylic resins L5
hexene
Effect of carboxylic acids on the yield and selectivity of the hydroformylation of hex-1-ene catalyzed by $[Rh(acac)(CO)(PPh_3)]$ 189
homogeneous catalysis
Ruthenium complex-catalyzed selective deoxygenation of amidoximes to amidines and its application to the facile synthesis of pyrimidines 383
homogeneous catalysts
Carbonylation of methyl acetate to acetic anhydride using homogeneous nickel complex catalyst 21
homologation
Novel catalytic procedure for selective homologation of primary alcohols L1
hydrazodicarboxamide
Catalytic oxidation of hydrazodicarbox-

amide to azodicarboxamide by oxygen L13
hydrido cobalt(I)
Decomposition of formic acid catalyzed by hydrido(phosphonite)cobalt(I) under photoirradiation 145
hydrido(phosphonite)cobalt(I)
Decomposition of formic acid catalyzed by hydrido(phosphonite)cobalt(I) under photoirradiation 145
hydrocarbons
Effects of water and onium ion phase-transfer catalyst on the rate of liquid-phase oxidation of hydrocarbons 353
hydroformylation
Vapour phase propene hydroformylation catalyzed by the Rh/Al system on silica 105
Effect of carboxylic acids on the yield and selectivity of the hydroformylation of hex-1-ene catalyzed by $[Rh(acac)(CO)(PPh_3)]$ 189
Gas phase hydroformylation of propene catalyzed by a polymer bound rhodium(I) complex 365
hydrogen
Catalytic reactions of formate: Part 1. Photocatalytic hydrogen production from formate with chromium hexacarbonyl 151
hydrogenation
Regioselective hydrogenation of 3-phenylpropenal and of *trans*-2-hexenal to saturated aldehydes catalysed by ultrafine rhodium particles dispersed on acrylic resins L5
Catalytic reactions of formate: Part 2. Aldehyde hydrogenation using chromium hexacarbonyl 165
Correlation between the single turnover (STO) site densities and the rates of 4-*tert*-butyl-1-methylcyclohexene hydrogenation over silica supported palladium catalysts 277
Pt/SiO_2 catalysts: a comparison of the impregnation and the sol–gel methods 299
hydrogen evolution
Photophysics and photosensitization behavior of microcrystalline $[Pt(bpy)_2]_2[Pt_2(pop)_4]\cdot nH_2O$ 327
hydrogen peroxide
Role of aliphatic diamine ligands in hydrogen peroxide decomposition with Dowex-50W resin as transition metal complex ions 11
immobilization
^{31}P spin lattice relaxation time measurements of the amphiphilic ligands $[Ph_2P(CH_2)_nPMe_3]^+$ in solution and tethered to a solid cationic exchange resin via the tetra-alkylphosphonium groups 43
immobilized enzymes
Influence of the modification procedure of support materials on the microenvironment of immobilized α-chymotrypsin 127
Importance of Hansch's π parameter in the catalytic action of microgel-immobilised subtilisin dissolved in tetrahydrofuran solvent 137
Influence of the chemical and textural properties of the support in the immobilization of penicillin G-acylase from *Kluyvena citrophila* on inorganic supports 269
impregnation
Pt/SiO_2 catalysts: a comparison of the impregnation and the sol–gel methods 299
infrared spectroscopy
Interaction of CO with platinum species in zeolites. Evidence for platinum carbonyls in partially reduced zeolite PtNaX 95
inorganic supports
Influence of the chemical and textural properties of the support in the immobilization of penicillin G-acylase from *Kluyvena citrophila* on inorganic supports 269
iron
Role of aliphatic diamine ligands in hydrogen peroxide decomposition with Dowex-50W resin as transition metal complex ions 11
On the nature of superactive centers in H-ZSM-5 zeolites: quantum chemical calculations 243
ketones
Formation of ketones from lower olefins and water on ultrastable Y-type zeolite catalyst 229

low temperature water gas shift
Interaction of CO with platinum species in zeolites. Evidence for platinum carbonyls in partially reduced zeolite PtNaX 95
manganese
Synthesis of a new chiral porphyrin ligand and its Mn(III) complex as catalyst in asymmetric alkene epoxidation 395
mercaptan
Influence of substituents and ligands of various cobalt(II) porphyrin derivatives coordinately bonded to silica on the oxidation of mercaptan 253
metal ions
Changes in activity of soluble and immobilized peroxidases after treatment by various proteases and some metal ions 117
metal–oxygen cluster compounds
Comparison of the surface properties of the metal–oxygen cluster compounds, 12-tungstophosphoric acid and ammonium 12-tungstophosphate from the sorption of benzene, nitrogen and pyridine 75
methyl acetate
Carbonylation of methyl acetate to acetic anhydride using homogeneous nickel complex catalyst 21
microgel
Importance of Hansch's π parameter in the catalytic action of microgel-immobilised subtilisin dissolved in tetrahydrofuran solvent 137
molybdenum
Catalytic oxidation of hydrazodicarboxamide to azodicarboxamide by oxygen L13
12-molybdophosphoric acid
Characterization of the compounds formed from the interaction of divalent cations with inorganic molecular metal–oxygen cluster compounds 59
nickel
Propadiene oligomerization catalyzed by nickel(0) phosphine complexes immobilized on phosphinated poly(styrene–divinylbenzene) support 181
nickel complexes
Carbonylation of methyl acetate to acetic anhydride using homogeneous nickel complex catalyst 21
nitrogen
Characterization of the compounds formed from the interaction of divalent cations with inorganic molecular metal–oxygen cluster compounds 59
NMR spectroscopy
^{31}P spin lattice relaxation time measurements of the amphiphilic ligands $[Ph_2P(CH_2)_nPMe_3]^+$ in solution and tethered to a solid cationic exchange resin via the tetra-alkylphosphonium groups 43
olefins
Formation of ketones from lower olefins and water on ultrastable Y-type zeolite catalyst 229
Regiochemical synthesis of straight chain acids by the palladium(II) catalyzed hydrocarboxylation of olefins with oxalic acid 377
oligomerization
Propadiene oligomerization catalyzed by nickel(0) phosphine complexes immobilized on phosphinated poly(styrene–divinylbenzene) support 181
onium ion
Effects of water and onium ion phase-transfer catalyst on the rate of liquid-phase oxidation of hydrocarbons 353
oxalic acid
Regiochemical synthesis of straight chain acids by the palladium(II) catalyzed hydrocarboxylation of olefins with oxalic acid 377
oxidation
Catalytic oxidation of hydrazodicarboxamide to azodicarboxamide by oxygen L13
Oxidation of organic substrates catalysed by mixed ligand Ru^{III} complexes. Investigation of active catalytic species and termination pathway 1
Palladium-catalyzed oxidation of triphenylphosphine 31
Influence of substituents and ligands of various cobalt(II) porphyrin derivatives coordinately bonded to silica on the oxidation of mercaptan 253
Effects of water and onium ion phase-transfer catalyst on the rate of liquid-phase oxidation of hydrocarbons 353

oxygen
Catalytic oxidation of hydrazodicarboxamide to azodicarboxamide by oxygen L13
Semiempirical study of carbon monoxide, oxygen and carbon adsorption on a modelled CoSi(100) surface 307
palladium
Dicarbonylation of 1,4-diacetoxy-but-2-ene in hex-3-ene dioate catalyzed by $PdCl_2$ in the presence of PBu_4Cl L9
Palladium-catalyzed oxidation of triphenylphosphine 31
Correlation between the single turnover (STO) site densities and the rates of 4-*tert*-butyl-1-methylcyclohexene hydrogenation over silica supported palladium catalysts 277
Regiochemical synthesis of straight chain acids by the palladium(II) catalyzed hydrocarboxylation of olefins with oxalic acid 377
palladium reduction
A new and convenient method for the synthesis of 3-alkyl thiophenes 201
penicillin G-acylase
Influence of the chemical and textural properties of the support in the immobilization of penicillin G-acylase from *Kluyvena citrophila* on inorganic supports 269
peroxidases
Changes in activity of soluble and immobilized peroxidases after treatment by various proteases and some metal ions 117
phase transfer catalyst
Effects of water and onium ion phase-transfer catalyst on the rate of liquid-phase oxidation of hydrocarbons 353
phenylacetylene
Pt/SiO_2 catalysts: a comparison of the impregnation and the sol–gel methods 299
phenylpropenal
Regioselective hydrogenation of 3-phenylpropenal and of *trans*-2-hexenal to saturated aldehydes catalysed by ultrafine rhodium particles dispersed on acrylic resins L5
phosphine derivatives
Dicarbonylation of 1,4-diacetoxy-but-2-ene in hex-3-ene dioate catalyzed by $PdCl_2$ in the presence of PBu_4Cl L9
phosphine ligands
Propadiene oligomerization catalyzed by nickel(0) phosphine complexes immobilized on phosphinated poly(styrene–divinylbenzene) support 181
phosphines
^{31}P spin lattice relaxation time measurements of the amphiphilic ligands $[Ph_2P(CH_2)_nPMe_3]^+$ in solution and tethered to a solid cationic exchange resin via the tetra-alkylphosphonium groups 43
Regiochemical synthesis of straight chain acids by the palladium(II) catalyzed hydrocarboxylation of olefins with oxalic acid 377
photocatalysis
Catalytic reactions of formate: Part 1. Photocatalytic hydrogen production from formate with chromium hexacarbonyl 151
photophysics
Photophysics and photosensitization behavior of microcrystalline $[Pt(bpy)_2]_2[Pt_2(pop)_4]\cdot nH_2O$ 327
photosensitization
Photophysics and photosensitization behavior of microcrystalline $[Pt(bpy)_2]_2[Pt_2(pop)_4]\cdot nH_2O$ 327
photocatalytic reaction
Decomposition of formic acid catalyzed by hydrido(phosphonite)cobalt(I) under photoirradiation 145
platinum
Synthesis and decarbonylation of platinum carbonyl cluster anions in zeolite NaY made basic by treatment with CsOH 49
Pt/SiO_2 catalysts: a comparison of the impregnation and the sol–gel methods 299
platinum carbonyl complexes
Interaction of CO with platinum species in zeolites. Evidence for platinum carbonyls in partially reduced zeolite PtNaX 95
platinum complexes
Photophysics and photosensitization behavior of microcrystalline $[Pt(bpy)_2]_2[Pt_2(pop)_4]\cdot nH_2O$ 327
polymer bound
Gas phase hydroformylation of propene catalyzed by a polymer bound rhodium(I) complex 365

porphyrin derivatives
Influence of substituents and ligands of various cobalt(II) porphyrin derivatives coordinately bonded to silica on the oxidation of mercaptan 253
porphyrin ligands
Synthesis of a new chiral porphyrin ligand and its Mn(III) complex as catalyst in asymmetric alkene epoxidation 395
primary alcohols
Novel catalytic procedure for selective homologation of primary alcohols L1
propadiene
Propadiene oligomerization catalyzed by nickel(0) phosphine complexes immobilized on phosphinated poly(styrene–divinylbenzene) support 181
propene
Vapour phase propene hydroformylation catalyzed by the Rh/Al system on silica 105
Gas phase hydroformylation of propene catalyzed by a polymer bound rhodium(I) complex 365
proteases
Changes in activity of soluble and immobilized peroxidases after treatment by various proteases and some metal ions 117
pyridine ligands
Photophysics and photosensitization behavior of microcrystalline $[Pt(bpy)_2]_2[Pt_2(pop)_4]\cdot nH_2O$ 327
pyrimidine
Ruthenium complex-catalyzed selective deoxygenation of amidoximes to amidines and its application to the facile synthesis of pyrimidines 383
pyrophosphate ligands
Photophysics and photosensitization behavior of microcrystalline $[Pt(bpy)_2]_2[Pt_2(pop)_4]\cdot nH_2O$ 327
quantum chemical calculations
On the nature of superactive centers in H-ZSM-5 zeolites: quantum chemical calculations 243
rhodium
Regioselective hydrogenation of 3-phenylpropenal and of *trans*-2-hexenal to saturated aldehydes catalysed by ultrafine rhodium particles dispersed on acrylic resins L5
Vapour phase propene hydroformylation catalyzed by the Rh/Al system on silica 105
Gas phase hydroformylation of propene catalyzed by a polymer bound rhodium(I) complex 365
rhodium complexes
Effect of carboxylic acids on the yield and selectivity of the hydroformylation of hex-1-ene catalyzed by $[Rh(acac)(CO)(PPh_3)]$ 189
ruthenium
Novel catalytic procedure for selective homologation of primary alcohols L1
Oxidation of organic substrates catalysed by mixed ligand Ru^{III} complexes. Investigation of active catalytic species and termination pathway 1
Ruthenium complex-catalyzed selective deoxygenation of amidoximes to amidines and its application to the facile synthesis of pyrimidines 383
selectivity
Effect of carboxylic acids on the yield and selectivity of the hydroformylation of hex-1-ene catalyzed by $[Rh(acac)(CO)(PPh_3)]$ 189
semiempirical study
Semiempirical study of carbon monoxide, oxygen and carbon adsorption on a modelled CoSi(100) surface 307
sepharose
Influence of the modification procedure of support materials on the microenvironment of immobilized α-chymotrypsin 127
silica
Vapour phase propene hydroformylation catalyzed by the Rh/Al system on silica 105
Characterization of chromium oxide supported on Al_2O_3, ZrO_2, TiO_2, and SiO_2 under dehydrated conditions 209
Influence of substituents and ligands of various cobalt(II) porphyrin derivatives coordinately bonded to silica on the oxidation of mercaptan 253
Correlation between the single turnover (STO) site densities and the rates of 4-*tert*-butyl-1-methylcyclohexene hydrogenation over silica supported palladium catalysts 277

Pt/SiO_2 catalysts: a comparison of the impregnation and the sol–gel methods 299
single turnovers
Correlation between the single turnover (STO) site densities and the rates of 4-*tert*-butyl-1-methylcyclohexene hydrogenation over silica supported palladium catalysts 277
sol–gel preparation
Pt/SiO_2 catalysts: a comparison of the impregnation and the sol–gel methods 299
sorption
Comparison of the surface properties of the metal–oxygen cluster compounds, 12-tungstophosphoric acid and ammonium 12-tungstophosphate from the sorption of benzene, nitrogen and pyridine 75
spin lattice relaxation
^{31}P spin lattice relaxation time measurements of the amphiphilic ligands $[Ph_2P(CH_2)_nPMe_3]^+$ in solution and tethered to a solid cationic exchange resin via the tetra-alkylphosphonium groups 43
subtilisin
Importance of Hansch's π parameter in the catalytic action of microgel-immobilised subtilisin dissolved in tetrahydrofuran solvent 137
superactive centres
On the nature of superactive centers in H-ZSM-5 zeolites: quantum chemical calculations 243
supported catalysts
Regioselective hydrogenation of 3-phenylpropenal and of *trans*-2-hexenal to saturated aldehydes catalysed by ultrafine rhodium particles dispersed on acrylic resins L5
Propadiene oligomerization catalyzed by nickel(0) phosphine complexes immobilized on phosphinated poly(styrene–divinylbenzene) support 181
Characterization of chromium oxide supported on Al_2O_3, ZrO_2, TiO_2, and SiO_2 under dehydrated conditions 209
Influence of substituents and ligands of various cobalt(II) porphyrin derivatives coordinately bonded to silica on the oxidation of mercaptan 253
Correlation between the single turnover (STO) site densities and the rates of 4-*tert*-butyl-1-methylcyclohexene hydrogenation over silica supported palladium catalysts 277
supported ligands
^{31}P spin lattice relaxation time measurements of the amphiphilic ligands $[Ph_2P(CH_2)_nPMe_3]^+$ in solution and tethered to a solid cationic exchange resin via the tetra-alkylphosphonium groups 43
surface properties
Comparison of the surface properties of the metal–oxygen cluster compounds, 12-tungstophosphoric acid and ammonium 12-tungstophosphate from the sorption of benzene, nitrogen and pyridine 75
termination pathway
Oxidation of organic substrates catalysed by mixed ligand Ru^{III} complexes. Investigation of active catalytic species and termination pathway 1
titania
Characterization of chromium oxide supported on Al_2O_3, ZrO_2, TiO_2, and SiO_2 under dehydrated conditions 209
tosylated sepharose
Influence of the modification procedure of support materials on the microenvironment of immobilized α-chymotrypsin 127
triphenylphosphine
Palladium-catalyzed oxidation of triphenylphosphine 31
12-tungstophosphoric acid
Characterization of the compounds formed from the interaction of divalent cations with inorganic molecular metal–oxygen cluster compounds 59
Comparison of the surface properties of the metal–oxygen cluster compounds, 12-tungstophosphoric acid and ammonium 12-tungstophosphate from the sorption of benzene, nitrogen and pyridine 75
ultrafine particles
Regioselective hydrogenation of 3-phenylpropenal and of *trans*-2-hexenal to saturated aldehydes catalysed by ultrafine rhodium particles dispersed on acrylic resins L5

ultrastable
Formation of ketones from lower olefins and water on ultrastable Y-type zeolite catalyst 229
vanadium
Catalytic oxidation of hydrazodicarboxamide to azodicarboxamide by oxygen L13
vanadium oxide
Finite supercluster model of vanadium oxide catalysts. Part II. Adsorbate–adsorbate interactions 341
water
Formation of ketones from lower olefins and water on ultrastable Y-type zeolite catalyst 229
water catalysis
Effects of water and onium ion phase-transfer catalyst on the rate of liquid-phase oxidation of hydrocarbons 353
zeolite
Synthesis and decarbonylation of platinum carbonyl cluster anions in zeolite NaY made basic by treatment with CsOH 49
zeolites
Interaction of CO with platinum species in zeolites. Evidence for platinum carbonyls in partially reduced zeolite PtNaX 95
Formation of ketones from lower olefins and water on ultrastable Y-type zeolite catalyst 229
On the nature of superactive centers in H-ZSM-5 zeolites: quantum chemical calculations 243
zirconia
Characterization of chromium oxide supported on Al_2O_3, ZrO_2, TiO_2, and SiO_2 under dehydrated conditions 209